

17-4 0.750

Work Order ID 129411

129411

Page 1

Item ID: D3407-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Stem

Start Date: 2/6/2015 Start Qty: 20.00

20

Cust Item ID:

Required Date: 2/6/2015 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: MLS

Date: 15-02-06 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3407

Rev E

100

0.00

100

DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA597 Rev: 1A & Dwg D3407 Rev: E

Mill slot width at max tolerance .260"

2-Deburr

20 5

SL
DAS 15.03.03
37
9-89

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

20 5

SL
DAS 15.03.03
37
9-89

ATU →

DQA:

Date:

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date:

Work Order update only ☐

Work Order: <u>129411</u>	DISPOSITION Rework ☒ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D3407-3</u>		Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. <u>15-4860</u>		Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	15-3-2	100	5	- 5 parts are scrap the thread is not deep enough on all 5 parts <u>faulty measurements</u> R.L. insert broke	 02/03/06 15/03/06	scrap+ replace <u>B131664</u>	JK 15-3-2	 DAS 14 9-89 15/03/06	 DAS 9 9-89 15-03-05
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☒ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 129411

129411

Page 2

Friday, February 06, 2015 11:15:51 AM

Item ID: D3407-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Stem

Start Date: 2/6/2015 Start Qty: 20.00

20

Cust Item ID:

Required Date: 2/6/2015 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							DAS 14 9-89
120						20			15/03/06
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location: <u>WA 001</u>	0.00							
130						20			DAS 06 9-89
Packaging	Memo	0.00							
Packaging									MAR 10 2015
140	QC21- Final Inspection - Work Order Release	0.00							
140									MCS 15-03-11
QC	Memo	0.00							
Quality Control									

HA 15-3-10

Picklist Print

Friday, February 06, 2015 11:15:56 AM

Page 1

Work Order ID: 129411

129411

Parent Item: D3407-3

D3407-3

Parent Item Name: Stem

Start Date: 2/6/2015

Required Date: 2/6/2015

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP Rev:A05.10.18New issueKJ/EC

IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD

IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174R0.750		Purchased		No		100	f	27.2500	0.366	8			
M174R0 750										**			
17-4 round bar .750													

DAS
37
9-89 5.03.03

Location

Loc Qty

Loc Code

MAT030

27.25

m127647

15.25

m130451

12

m131664

1096.

* Could not pull material *

DART AEROSPACE LTD		Work Order:	129411
Description: Stem		Part Number:	D3407-3
Inspection Dwg: D3407	Rev: E	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

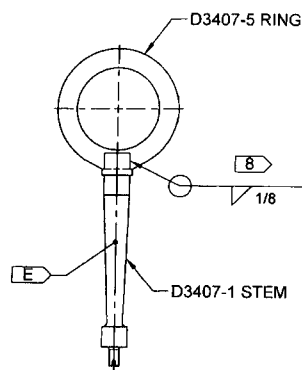
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	063	/		JERN	SL-10
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.266	/			
Major Ø	Max: 0.249 Min: 0.2425	.248	/		mic	SL-4
Ø0.625	+/-0.010	.629	/			
Ø0.363	+/-0.010	.364	/			
Ø0.750	+/-0.010	.751	/			
R0.100	+/-0.010	.100	/			
0.470	+/-0.010	.470	/			
0.250	+/-0.010	.249	/			
2.555	+/-0.010	2.555	/			
3.305	+0.000/-0.010	3.299	/		HG	
4.325	+/-0.010	4.327	✓		DR 16	8' NEW
0.150	+/-0.010	.155	✓		"	"
0.550	+/-0.010	.554	✓		"	"
0.625	+/-0.010	.623	✓		"	"
0.250	+0.010/-0.000	.258	✓		"	"

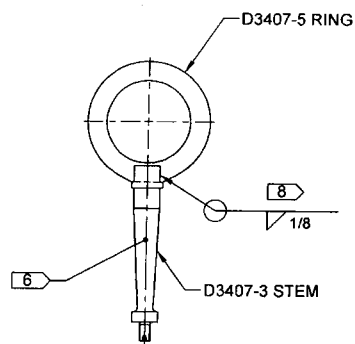
Measured by: <u>SL 37</u>	Audited by: <u>DAS 14</u>	Prototype Approval:	N/A
Date: <u>15/03/06</u>	Date: <u>15/03/06</u>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.11.08	New Issue	KJ/JLM	
B	07.09.26	Tolerances revised	KJ/EC	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	

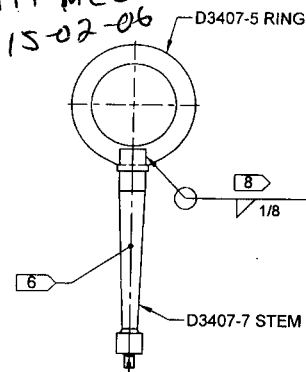
QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM



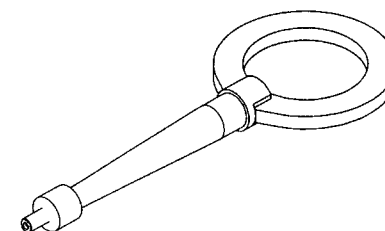
D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING

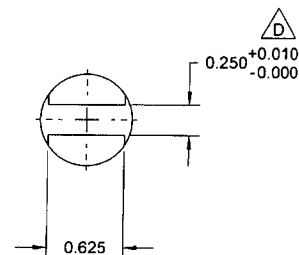
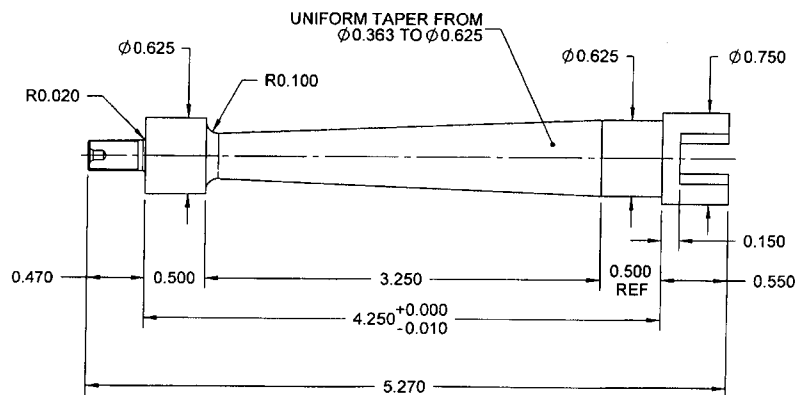
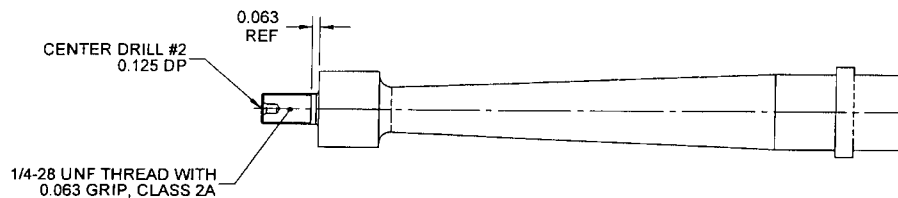


RELEASED

- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
 - 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

REV.	DESCRIPTION	BY	DATE
E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/-3 LONGER FOR FIT W/WASHER	CP	05.09.08
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
DESIGN	DRAWN	CHECKED	MFG. APPR.
APPROVED	DE APPR.	DATE	08.07.23
DART AEROSPACE USA, INC. PORT HADLOCK, WA			
DRAWING NO. D3407		REV. E	
TITLE TOW RING		SHEET 1 OF 5	
DATE		SCALE	
		NTS	

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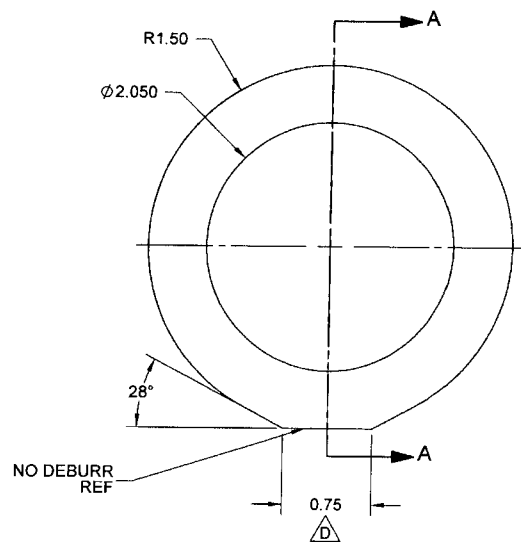


D3407-1 STEM

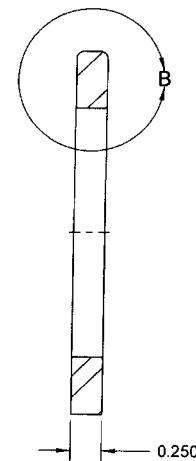
RELEASED

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.33 lbs

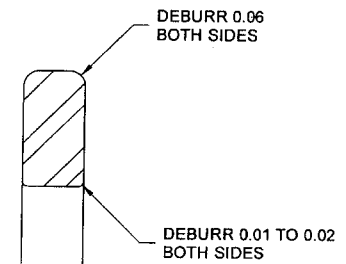
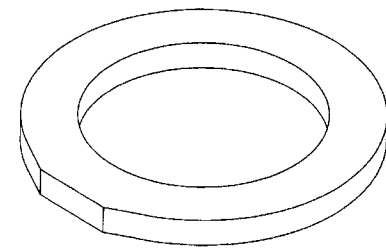
DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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D3407-5 RING



SECTION A-A



**DETAIL B
SCALE 2X**

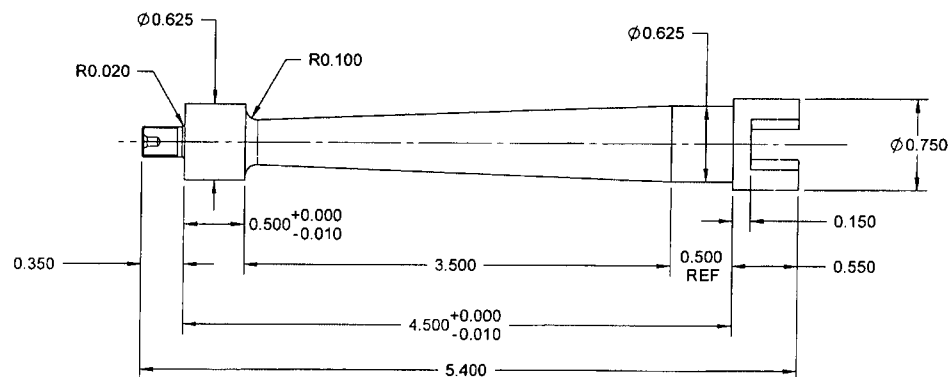
RELEASED
08-08-2023

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	92	DART AEROSPACE USA, INC.	
DRAWN	1/2	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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0.063
REF
CENTER DRILL #2
0.125 DP

1/4-28 UNF THREAD WITH
0.063 GRIP, CLASS 2A



 **D3407-7 STEM**

- NOTES:
1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
6) IDENTIFICATION: N/A
7) WEIGHT: 0.34 lbs

DESIGN	AJS	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN			
CHECKED		DRAWING NO. D3407	REV. E SHEET 5 OF 5
MFG. APPR.		TITLE TOW RING	SCALE NTS
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DE APPR.			
DATE	08.07.23		